DEC STD 096-0 UNIGRAPHICS File Structure

DOCUMENT IDENTIFIER: A-DS-EL00096-00-0000 Rev A, 13-May-1991

ABSTRACT: This document describes the file-naming structure for UNIGRAPHICS files for products that are in development (UNIGRAPHICS is a registered trademark of McDonnell Douglas Corporation). This structure provides a framework to identify the stage of development and the contents of the drawing file.

APPLICABILITY: This standard is mandatory for all UNIGRAPHICS design centers.

STATUS: APPROVED 13-May-1991; use VTX SMC for current status.

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1 INTRODUCTION

This standard provides rules for the contents of UNIGRAPHICS files so the same kind of information is presented in the same layer ensuring consistency among files and ease of use.

1.1 PURPOSE

This standard establishes rules to maintain consistency within UNIGRAPHICS files.

1.2 SCOPE

This standard is mandatory for use worldwide among UNIGRAPHICS system users.

1.3 RESPONSIBILITIES

The CAD manager and supervisors in each UNIGRAPHICS design center are responsible for fulfilling the requirements of this standard.

2 RULES

The following format establishes the project file to be used, the file contents, the type of file, and the file revision number.

2.1 FILE NAMING

a. Preliminary files are layouts and other files created before Digital part numbers are assigned.

__ __ __ … __ __ __ – __ __ – __ __ __ __ . __ __ __

File Content Description | Drawing Code | File Revision | File Extension

Example
MTNGPLATE-MD-A.PRT (26 characters maximum)
where:

File Content Description	Short description of file.
Drawing Code	MD, UA, TC and so on. See *DEC STD 012-0 Part Identification Standard* and *DEC STD 012-1 Documentation Identification Conventions Including Mnemonic Codes* for further information.
File Revision	For example, AX01, A, B, and so on
File Extension	File extension for file definition

b. Numbered files are files that have assigned part numbers but are not yet released. Also see *DEC STD 012-0 Part Identification Standard* for further information.

__ __ – __ __ __ __ __ __ __ – __ – DBUAX00 . __ __ __

Drawing Code	Base Part Number	Variable Identifier	Reference Identifier with Revision Control Designator	File Extension

Example
MD-7444444-0-DBUAX00.PRT
where:

Drawing Code	MD, UA, TC, and so on
Base Part Number	Consists of the 2-digit part class and 5-digit basic numbers.
Variable Identifier	Identifies the variable number.
Reference Identifier	DBU for Data Base Unit, followed by the 4-character revision control designator. For example: If the drawing revision is AX02, the reference identifier shall be DBUAX02.
File Extension	File extension for file definition

c. Numbered files going to ECO release:

The reference identifier uses the same designator that corresponds to the revision of the document being released.

Example:
MD-7444444-0-DBUA.PRT

2.2 FILE STRUCTURE

a. Identifying Layers

The Categories section within Layer Control identifies the contents of the layers, enabling the user or viewer to locate information within the data base.

- Categories shall be assigned to layers using easily understood words or names, and listed in the Categories field within Layer Control.

  Example: Layout file

  LAYER 1 INDEX
  LAYER 3 DRAWING-FORMATS, DIM
  LAYER 5 BASE
  LAYER 6 COVER
  LAYER 7 BRACKET
  and so forth

- Drawing files shall also have the layer category assigned for the drawing sheet number. All layers for SHEET-1 shall have a layer category named SHEET-1. If the geometry is on both SHEET-1 and SHEET-2, the layer category shall be both SHEET-1, SHEET-2.
  Example: Single-part drawing file

  LAYER 1 INDEX
  LAYER 3 DRAWING-FORMATS, DIM
  LAYER 5 GEOMETRY, SHEET-1
  LAYER 6 DIMS, SHEET-1

  Example: Multi-part drawing file, such as a weldment or assembly

  LAYER 1 INDEX
  LAYER 3 DRAWING-FORMATS, DIM
  LAYER 5 BASE-PLATE, SHEET-1
  LAYER 6 MTG BRKT, SHEET-2
  LAYER 7 COVER, SHEET-1, SHEET-2
  LAYER 8 DIMS, SHEET-1
  LAYER 9 HARDWARE, SHEET-1, SHEET-2
  LAYER 10 DIMS, SHEET-2

b. Layering

- LAYER 1: Reserved for index. Used to guide the user or viewer to the correct locations in the data base. Use the record chart shown in Figure 1 and expand as necessary. Keep layer information on this layer only.
- LAYER 2: Not used
- LAYER 3: Drawing-Formats; any format-related text and dimensions
- LAYER 4: Not used
- LAYER 5-256: Geometry layers (layout and drawing files). Includes part geometry and related dimensions.

c. Creation

3D layout files

- Create geometry starting on LAYER 5 using the UNIGRAPHICS DEFAULT views and layouts. Create all geometry with scale = 1.0.

  Sections, views, and details shall be created from the model using view dependent editing in VIEW DEPENDENT MODE. MODEL creation mode shall be used when creating geometry.

- Create geometry for sections, views, details, and so forth in appropriately named views, using VIEW DEPENDENT creation mode. For example, section A-A should be created in a view named SEC-A, detail A in a view named DET-A, and so forth. See section 2.3 for view-naming conventions.

Figure 1: File Information Record

FILE INDEX RECORD

FILE NAME: DATE CREATED:

REVISION: DESIGNER:

REVISION DATE: RESPONSIBLE ENGINEER:

LAYER	DESCRIPTION	LAYER CATEGORIES	VIEW NAME	LAYOUT NAME	DRAWING NAME	VIEW SCALE
1	LAYER INFORMATION	INDEX				
2						
3						
4						
5						
6						
7						
8						
9						
10						

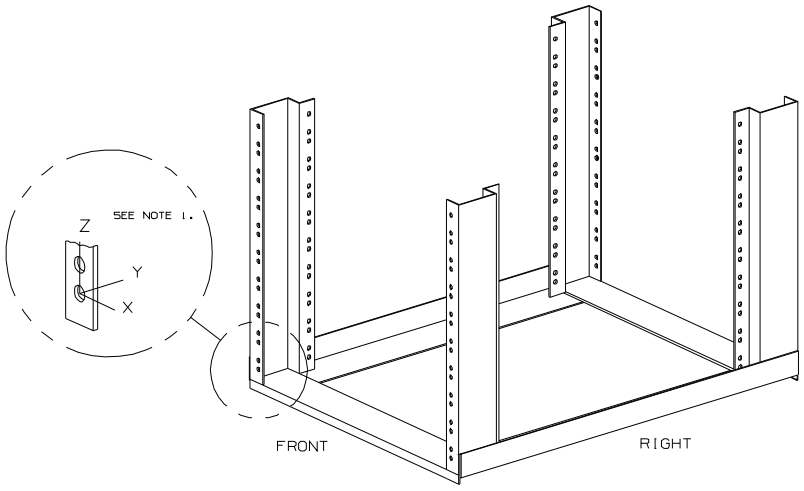
- To simplify merging files, all creation shall be done as viewed from the front of the cabinet that uses the part (see Figure 2). In some instances, parts may have to be created from a different viewing angle; this is at the discretion of the designer. All layouts that use a corporate cabinet shall, where possible, locate the very bottom mounting hole on the left rail looking from the front of the cabinet at absolute coordinates 000.
- Separate different parts to different layers as needed. Keep **all** geometry for a component on its own layer(s). When using more than one of the same component, keep all the components on the same layer(s) whenever possible.

- When ready to create the drawing file, extract the necessary geometry from the layout file into a mergeable part file.

  The UNIGRAPHICS feature, Drawing Control, shall be used in all files.

  The Grip program FORMATFILL shall be used to generate and fill all drawing formats.

Figure 2: Cabinet View



Note 1: Absolute coordinates. 000 is the very bottom mounting hole on the left front rail. In some cases, a part may have to be created from another viewing angle. This is at the designer's discretion.

2.3 VIEW-NAMING CONVENTIONS (FOR EDITED VIEWS)

The number of the layer where the view is located shall be included in the view name.

Section views	SEC-A-_ _ _ SEC-B-_ _ _ and so forth
Views	VIEW A-A should be VIEW-A-_ _ _ VIEW B-B should be VIEW-B-_ _ _ and so forth
Detail views	DETAIL A should be DET-A-_ _ _ DETAIL B should be DET-B-_ _ _ and so forth
Auxiliary views	AUX-A-_ _ _ AUX-B-_ _ _ and so forth

Projected views	FRONT-EDT-_ _ _ TOP-EDT-_ _ _ LEFT-EDT-_ _ _ and so forth

NOTE

The numbers used in the view name can be any number from 5 through 256.

NOTE

If a view is on more than one layer, then list all the associated layers, such as SEC-A-15-16, and so forth.

2.4 CHARACTER HEIGHT REQUIREMENTS

Character height requirements are shown in Tables 1 and 2. Also see *DEC STD 182-0 Engineering Documentation Acceptance Criteria* for further information.

NOTE

These heights are the text height in the final scale, that is, on the drawing sheet.

Table 1: Character Height Requirements for Metric Unit Engineering Drawings Created in UNIGRAPHICS

	Character Height for Each Drawing Size, millimeters (inches)				
Information Category	A4	A3	A2	A1	A0 and over
Characters in body of drawing including notes	4 (.156)	4 (.156)	4 (.156)	4 (.156)	
Item callouts when using balloons[1] (per ANSI standards)	4 (.156)	4 (.156)	4 (.156)	4 (.156)	5 (.187)
Item callouts not using balloons	6 (.25)	6 (.25)	6 (.25)	6 (.25)	6 (.25)
X and Y coordinates	10 (.38)	10 (.38)	10 (.38)	12 (.50)	12 (.50)
Surface quality (when required)	3 (.10)	3 (.10)	3 (.12)	3 (.12)	3 (.14)

[1] Item callout balloon sizes: A3, A2, and A1 format 15 mm (0.6 in); A0 format 18 mm (0.7 in)

Table 2: Character Height Requirements for U.S. Customary Unit Engineering Drawings Created in UNIGRAPHICS

	Character Height for Each Drawing Size, inches				
Information Category	A	B	C	D	E and over
Characters in body of drawing including notes	.156	.156	.156	.156	.187
Item callouts when using balloons[1] (per ANSI standards)	.156	.156	.156	.156	.187
Item callouts not using balloons	.25	.25	.25	.25	.25
X and Y coordinates	.38	.38	.38	.50	.50
Surface quality (when required)	.10	.10	.12	.12	.14

[1] Item callout balloon sizes: B, C, and D format 0.6 in; E format 0.7 in

APPENDIX A REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00012-00	*DEC STD 012-0 Part Identification Standard*
EL-00012-01	*DEC STD 012-1 Documentation Identification Conventions Including Mnemonic Codes*
EL-00182-00	*DEC STD 182-0 Engineering Documentation Acceptance Criteria*

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